

It all adds up to cleaner air

Federal Highway Administration

FACT SHEET

Trip Chaining

Remember when you got your chores done all at once so you could go out and play? Trip chaining is the same idea...only you'll save the air in addition to saving time.

When you start your car after it's been sitting for more than an hour, it pollutes about five times more than when the engine is warm¹. That's why combining your errands into one trip means more time in your life, less traffic congestion, and less pollution...which all adds up to cleaner air.

So make a list, plan your route, and trip chain. You'll be saving a lot more than just time.

Here are some trip chaining facts to consider:

- Family and personal business—including window shopping, purchasing goods and services, doctor visits, picking up or dropping off someone, and other personal reasons, such as haircuts, banking, and car repair—account for about 45% of all trips.²
- Combining three separate short trips (such as to a nearby bank, post office, and grocery store) into one trip every week could eliminate about 200 miles on your vehicle, and save you 10 hours and 10 gallons of gas every year.³
- Emissions are highest when a vehicle is started “cold.” For example, starting a 5-mile trip when the engine is cold generates about 17% more nitrogen oxides and 50% more volatile organic compounds than the same trip when the car is started warm.¹
- Eliminating five separate 1-mile trips reduces about the same amount of ozone-related pollution as eliminating one 15-mile trip.¹
- Between 1995 and 2001, there was a 21% increase in the number of commuters who trip chained in the home-to-work direction and a 12% increase in commuters who trip chained in both directions.⁴

¹ U.S. Environmental Protection Agency MOBILE6 model run performed by the Federal Highway Administration on September 24, 2003.

² Federal Highway Administration, National Household Travel Survey 2001: Highlights Report, BTS03-05 (Washington, DC: 2003)

http://www.bts.gov/publications/highlights_of_the_2001_national_household_travel_survey/ (Table A-11).

³ Original research done for the Federal Highway Administration (FHWA) using data from FHWA's Highway Statistics 2001 (October 2002), Pub #FHWA-PL-02-008 (Table VM-1 <http://www.fhwa.dot.gov/ohim/hs01/pdf/vm1.pdf>), and National Household Travel Survey 2001 <http://nhts.ornl.gov/2001/index.shtml>. Gas savings calculated using the average commuting distance of 12.19 miles each way multiplied by 96 eliminated trips (one trip each way for 48 weeks), then divided by the average vehicle's 20 MPG fuel economy. Substitute your own commute and fuel economy to estimate your gas savings.

⁴ U.S. Department of Transportation, Federal Highway Administration; Our Nation's Travel: Current Issues, FHWA-PL-05-015, p. 29.